

## **ASYNCHRONOUS COMPUTER-MEDIATED CORRECTIVE FEEDBACK AND THE CORRECT USE OF PREPOSITIONS: Is It Really Effective?**

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### **ABSTRACT**

An area that has recently attracted increasing attention is providing feedback on learners' writing accuracy through the Internet. However, research in this area has largely focused on synchronous communication, i.e., chatting, with fewer studies assessing asynchronous technologies, i.e., e-mailing. Therefore, this study investigates the effectiveness of asynchronous computer-mediated corrective feedback-explicit and implicit, on increasing the correct use of prepositions. Forty-five Iranian elementary EFL learners at the ILI in Tehran were randomly assigned to two experimental groups, receiving explicit and implicit corrective feedback respectively, and one control group receiving no corrective feedback. Each group included 15 participants. After the treatment, a post-test was administered to assess the probable increase in the correct use of prepositions for the experimental groups compared to the control group.

Analysis of the results through a one-way ANOVA revealed that the experimental group 1 who received explicit corrective feedback significantly outperformed the experimental group 2 and the control group. The experimental group 2 who received implicit corrective feedback showed no significant improvement over the experimental group 1 and the control group.

Although the findings support the current view on feedback through technology, due to the scarcity of research, more investigation is merited as there is much to gain regarding this burgeoning field.

**Keywords:** Computer-mediated communication, asynchronous CMC, synchronous CMC, the Internet, corrective feedback, e-mail, chat.

### **INTRODUCTION**

Since the introduction of the Internet and prevalence of computers, more and more people have been using electronic media to cover hosts of purposes such as interpersonal communication, sending and receiving information, educational and language learning and teaching perspectives, etc.

The application of computer and the Internet can be expected to have a myriad of positive effects on language learning. It has been proved that communication through the Internet will have a significant motivational effect on the students (e.g., Warschauer, 1996) which further helps them improve their communicative skills both orally and in the written form.

According to Quan-Hasse, Cothrel, and Wellman (2005), the introduction of computer technologies such as the Internet, e-mail, chat, etc, into educational environments has made it possible for learners to communicate ideas, information, and their feelings without any limit on time and space. Similarly, Zhao (2006, p. 14) referred to the application of the Internet and said that "The Internet is the first major medium of communication that allows people to establish new social contacts outside the face-to-face context as well as to maintain existing ties formed in corporeal copresence". Carter (1997) also stated that the emergence of faxes, e-mail communications, and word-processed texts has changed the ways in which written language can be utilized to maintain interpersonal interaction among different interlocutors within their social, cultural, and learning context.

### **Computer-Mediated Communication**

Language educators and specialists have recently begun to discover the potentiality of computer technologies and in particular computer-mediated communication (CMC) for language learning and teaching. The term CMC was first coined and introduced by Hiltz and Turoff (1978) while experimenting on computer conferencing as a means of communication on the Internet. Barnes (2002) defined CMC as a wide range of technologies that paves the way for human interaction and communication and sharing of information through interconnected networks of computers including e-mail, discussion groups, newsgroups, and real-time chat. December (1997, p. 3) also stated that "Computer-Mediated Communication is a process of human communication via computers, involving people, situated in particular contexts, engaging in processes to shape media for a variety of purposes". Having been adopted in language learning and teaching, CMC has proved to be more effective than class-restricted environment in that students no longer feel bored and frustrated with monotonous materials, methods of teaching, and course presentation and can learn new things in much more interesting and effective ways. Fey (1998) maintained that "computer networks are allowing students to transcend boundaries of classroom walls and to learn in new ways" (p. 86). According to Warschauer (2001), CMC or "on-line communication refers to reading, writing and communication via networked computers" and comprises of:

- 1. Synchronous computer-mediated communication, whereby people communicate in real time via chat or discussion software, with all participants at their computers at the same time;
- 2. Asynchronous computer-mediated communication, whereby people communicate in a delayed fashion by computer, e.g. by email; and
- 3. The reading and writing of on-line documents via the internet. (p. 207).

Recently, pedagogical contributions of computer technologies have been extensively researched and beneficial outcomes have been reported. CMC can be greatly utilized in order to work on the writing improvement of English learners because according to Goodman and Graddol (1996), computer-mediated technologies are mostly concerned with written texts through English language resulting in direct teacher-student interaction focusing on linguistic accuracy of the learners.

By making a comparison between CMC and face-to-face communication, Bordia (1996) aptly concluded that CMC is "a combination of written and oral styles of communication" (p. 150).

Maynor (1994) also maintained that e-mailing as one of the primary means of asynchronous CMC (ACMC), represents itself as a converging point for both oral and written modalities in a two-way communication. This means that, computer-mediated writing, also exhibits characteristics of face-to-face communication. ACMC, as the name speaks for itself, provides mediated media of communication that provides interlocutors with an opportunity to deliberate, review, revise or even cancel the flow of communication before sending the information to the recipient (Heisler & Crabill, 2006). This valuable property of ACMC helps learners learn how to reflect on the content of what they are going to convey and be critical of what they have in mind. Therefore, asynchronous communication can deeply involve learners in the processes of critical thinking (Lee, 2004) and problem solving (Jonassen & Kwon, 2001) by demanding more focused and purposeful communication. Warschauer (1995) also emphasized the role of e-mail in CMC and said that e-mail is the most important application regarding the Internet. It has also been suggested that using computer technologies can help learners increase their opportunities to use target language (Barson, Frommer, & Schwartz, 1993).

Thus, these opportunities result in the improvement of the quality of written and spoken language (Sotillo, 2000) and negotiation of meaning (Blake, 2000). Sotillo (2000) also maintained that because of delayed nature of e-mail, learners have more opportunities to produce syntactically complex language.

### **Corrective Feedback and Learning**

In the course of learning target languages, it is quite possible that learners deviate from target-like forms by making syntactic errors and mistakes which, according to Schmidt's (1990) Noticing Hypothesis, are indicative of differences between the target form and learners' interlanguage. As stated by Long and Robinson (1998), when learners interact with one another, they receive feedback based on which modified output is provided resulting in the development of learners' interlanguage. When learners make mistakes, teachers usually resort to giving students appropriate feedback as to guide them towards the target language.

The mismatch between what the learners receive as input and what they produce as output can be effectively dealt with by means of appropriate corrective feedback provided by the teacher (Campillo, 2003) which helps learners integrate correct language. According to Lightbown and Spada (1990), corrective feedback is any indication to learners by teachers that their use of the target language is erroneous and needs to be modified in some way.

Brown (1988) also stated that feedback should be provided for learners as it helps them experience the effect of what they have produced as a guide to their future output. Having identified an error in the process of interaction, teachers can resort to two types of negative corrective feedback as a response to the mismatch: *explicit* and *implicit* corrective feedback.

According to Campillo (2003), "explicit corrective feedback involves the explanation of a formal aspect after an error has been made.

In turn, implicit corrective feedback refers to ways which indicate that the learner's output is somehow erroneous, and needs to be reformulated " (p. 210).

Appendix A summarizes definitions and examples of corrective feedback strategies proposed by Lyster and Ranta (1997) as cited in Sauro (2009, p. 99). Campillo (2003) also indicated that corrective feedback is crucial to the development of Second Language (SL) as it provides learners with opportunities to contemplate on and take into account other possibilities. Campillo (2003) further cited Carroll and Swain (1993) and indicated that corrective feedback is “also applicable to the foreign language (FL) context, in the sense that it may trigger the cognitive processes required for acquisition” (p. 212).

In conclusion, with respect to the aforementioned benefits of computer technologies concerning grammar accuracy and corrective feedback, it can be argued that, research on learning outcomes following computer-mediated corrective feedback is still limited (e.g., Loewen & Erlam, 2006; Sachs & Suh, 2007) and to the best of our knowledge, no attempt has ever been made, especially in Iran, to assess the effectiveness of asynchronous computer-mediated corrective feedback—explicit and implicit, via e-mail on the correct use of English prepositions.

Therefore, the present research was undertaken with the hope that its findings might help to enhance the practices of TEFL.

## **THEORETICAL BACKGROUND**

### **Corrective Feedback**

Different studies have been carried out which have investigated the effectiveness of both explicit and implicit corrective feedback on grammatical and linguistic accuracy of learners’ production. Campillo (2003) referred to some previous research on explicit and implicit feedback and mentioned that Lightbown and Spada (1990) analyzed the effect of explicit corrective feedback in an intensive communication classroom having English as SL and found out that teaching of formal aspects of language contributed positively to the learners’ linguistic and grammatical accuracy. Campillo (2003) also stated that implicit corrective feedback has been thoroughly investigated and integrated into teaching environments in several ways and positive results have been reported. Campillo (2003) mentioned Lyster and Ranta (1997) and said that they carried out their study through different types of corrective feedback ranging from explicit to implicit at primary levels. Consequently, as stated by Campillo (2003), “The findings of the study revealed that recasts were the most used technique by the teachers (55% of the cases), followed by elicitation (14%), clarification requests (11%), metalinguistic feedback (8%), explicit correction (7%), and repetition (5%)” (p. 212).

In the same way, Zhuo (2010) conducted a study examining “the relative effects of explicit and implicit recasts on the acquisition of English noun plural by Chinese EFL learners” (p. 55). In this study, students were randomly assigned to three groups: the first group received corrective feedback through explicit recast; the second group received implicit recast; and the last group acted as the control group receiving no feedback. In line with Campillo’s findings, the results of Zhuo’s study showed that recasts were more effective than other types of corrective feedback in bringing students’ attention to their erroneous language structures. Sheen (2004) also examined the role of corrective feedback in increasing learners’ uptake in communication classes in four contexts: “French Immersion, Canada ESL, New Zealand ESL and Korean EFL” (p. 263).

Findings of this study indicated "that recasts were the most frequent feedback type in all four contexts but were much more frequent in the Korean EFL and New Zealand ESL classrooms (83% and 68%, respectively) than in the Canadian Immersion and ESL classrooms (55% for both)" (p. 263).

Brief review of corrective feedback literature revealed that most studies have so far been done with respect to recasts and a little, if any, investigation has been carried out regarding other types of corrective feedback such as explicit, repetition implicit, etc.

### **Synchronous and Asynchronous CMC and Corrective Feedback**

According to Sauro (2009), as technology is making its way into language learning and teaching environments, written CMC holds particular promises for the learning of complex and low salience features and forms. Furthermore, synchronous and asynchronous environments are ideal contexts for the investigation of corrective feedback during written communication as they provide student-teacher interaction in a way that increases students' awareness towards target language and eliminates time and distance limitations.

Corrective feedback in this sense can draw learners' attention to the discrepancies between learners' output and target-like norm and facilitate the occurrence of noticing of the gap which according to Schmidt (2001) is the "first step in language building" (p. 31). Sauro (2009) also stated that according to Schmidt's (1990) Noticing Hypothesis "for learning to occur, second language learners must attend to and notice details and differences between the target language and their interlanguage and its representation in their production of output" (pp. 96–97).

It should be mentioned that some studies have also investigated synchronous and asynchronous computer-mediated corrective feedback in language learning and teaching environments in order to substantiate its efficacy on the improvement of learners' linguistic and grammatical abilities. Hanson-Smith (2001) cited Holliday (1999) for his experiment with a large corpus of students' e-mails and mentioned that Holliday "has established that electronic communication provides a range and distributive frequency of linguistic features comparable to other genre of writing and speaking. He suggests that the repetitive nature of e-mail ... assists learners in understanding linguistic cues" (p. 109). This study clearly shows that CMC can help learners improve grammatical accuracy of their writing due to the fact that they can use linguistic cues more frequently and therefore pay more attention to the accuracy of their writing. Romm and Pliskin (1999) also supported that ALCMC through e-mailing provides learners with a friendly environment in which they no longer have the feeling of being isolated and excluded. Accordingly, they contribute more willingly to maintain the flow of communication, pay more attention to the teacher-provided instructions, and participate in interpersonal interactions with others more than before. Few studies (see for example Lea, 2001) on ALCMC and students' academic writing assignments showed that students made use of online collaborative learning context, reflected on their own learning, drew upon their peers' feedback in the construction of their own knowledge, and thus, benefited their own academic writing. In one study on ALCMC, St. John and Cash (1995) found out that an adult language learner dramatically improved his German via e-mail exchanges with a native speaker, because the learner systematically studied and reflected on the new vocabulary and grammatical structures in his incoming e-mails and used this information to improve the content of his future letters with impressive results.

This is indicative of the usefulness of learner's interaction with a more capable peer (Vygotsky, 1978) such as teachers, native speakers, etc, resulting in receiving and benefiting from appropriate feedback. Therefore, this can be viewed as an undeniable fact that ACMC via e-mail exchanges can be expected to improve learners' grammar and linguistic awareness through explicit and implicit corrective feedback provided by a more capable peer.

Similarly, most studies on the efficacy of corrective feedback through SCMC have so far been concerned with recasts and meta-linguistic types of feedback and promising results have been produced. As opposed to e-mail which is the most applicable tool regarding asynchronous studies, application of chat, as an appropriate learning and teaching medium regarding SCMC, has been gaining increasing popularity among scholars and researchers likewise due to the fact that it resembles face-to-face communication in its immediacy of interaction.

Finally, in one study, Razagifard and Rahimpour (2010) investigated the effectiveness of corrective feedback through chat on learners' grammar improvement and found out that meta-linguistic corrective feedback is more effective than recasts in getting learners to both notice the gap and enhance their ability to correctly apply grammatical structures.

### **The Present Study**

The present brief survey of the related literature reveals that few researchers have so far embarked on investigating the impact of explicit and implicit computer-mediated corrective feedback through e-mail in Iran and even internationally. Moreover, with respect to CMC, most studies in this field have so far primarily dealt with the effect of recasts and meta-linguistic types of corrective feedback via SCMC and chat. Consequently, the aim of the present study was to investigate the extent to which asynchronous computer-mediated corrective feedback might be effective in promoting learners' correct application of English prepositions and the following research questions were proposed:

- Q1. Does asynchronous computer-mediated corrective feedback-*explicit*, have any significant effect on the correct use of prepositions?
- Q2. Does asynchronous computer-mediated corrective feedback-*implicit* have any significant effect on the correct use of prepositions?

## **METHOD**

### **Participants**

The participants of this study consisted of adult elementary EFL learners from Iran Language Institute (the ILI) in Tehran aged 16 or more whose mean age was 21. The reason for selecting elementary learners was that it was assumed that since they were beginners, they would not know much about the details of EFL syntax. In order to make sure of the learners' proficiency level and homogeneity, Key English Test (KET, 2009) developed by Cambridge University was administered prior to the treatment. The participants were selected voluntarily and according to their access to the Internet out of the class sessions. Out of the subject pool, forty-five participants (N=45) were randomly identified as two experimental groups and one control group, i.e. each group consisted of 15 participants. The experimental group 1(N=15) received explicit corrective feedback.

The experimental group 2 (N=15) received implicit repetition corrective feedback. And the control group (N=15) received placebo feedback. Assignment of the participants to the experimental and control groups were random as well.

### **Target Structure**

English prepositions were chosen in this study as target forms for three reasons. Because as Swan (2005) stated, first, "It is difficult to learn to use prepositions correctly in a foreign language". Second, "different prepositions can have very similar uses (in the morning, on Monday morning, at night)" thus, confusing for EFL learners. Third, "English has no preposition where one may be used in another language; in other expressions the opposite is true" (p. 425).

So in this study, the emphasis was put on increasing the awareness over the correct use of prepositions rather than on instructing learners how to use them. Therefore, this study attempted to enhance learners' ability to correctly apply prepositions through asynchronous computer-mediated corrective feedback.

### **Instruments**

The participants of this study were presented with their regular coursebooks developed by the ILI. Elementary coursebooks at the ILI comprise of ten units and each unit is further divided into two sections, and every section is covered in one session lasting for an hour and forty-five minutes. Session one is devoted to conversation, grammar, and vocabulary. Session two covers reading, grammar, and listening. Classes are held twice a week.

The total of 21 sessions covers the whole term for each of the three elementary levels at the ILI. The participants were required to submit an e-mail and the modified version of the same e-mail after receiving corrective feedback from the second session on as home assignment every week after covering every unit, using computer or laptop out of the classroom. At the end of the treatment, learners' grammar improvement on prepositions was assessed using following instruments as their post-test:

### **Prepositions**

- Seventeen independent sentences containing 28 gaps (Neylor & Murphy, 1996; Murphy, Altman, & Rutherford, 1989).
- Nine independent sentences each including three possible choices (Galbarczyk & Szmerdt, 2001).
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### **Procedure**

Prior to the treatment, the participants were told that they were obliged to write at least one paragraph or maximum two consisting of 100 to 150 words every week. From the second session on, they were required to submit an e-mail on a topic in line with their regular course book contents provided by the researcher as home assignment. All the participants in three groups received the same topic every week.

The total of eight writing topics was provided for the participants during the experiment. The experimental group 1 received explicit corrective feedback, i.e., the instructor indicated that an error had been made, identified the error and provided the correction to which repetition was required by the participants as modified output.



### **Example (1), asynchronous corrective feedback-explicit**

**Alireza:** I think each of them is a separate part of learning process; it's better for me use a teacher because he can help me in conversation, in accent and when I have questions in my mind, I can ask my questions from my teacher directly....**Instructor's corrective Feedback:** I think each of them is a separate part of learning process; it's better for me to use a teacher (you should say: better for me to use a teacher not \*better for me use a teacher) because he can help me with conversation (you should say: help me with conversation not \*help me in conversation), with accent (you should say: with accent not \*in accent) when I have questions in my mind, I can ask my teacher my questions directly (you should say: ask my teacher my questions not \*ask my questions from my teacher) ....

**Modified output by Alireza:** I think each of them is a separate part of learning process; it's better for me to use a teacher because he can help me with conversation, with accent and when I have questions in my mind, I can ask my teacher my questions directly....

The experimental group 2 received implicit repetition corrective feedback, i.e., the instructor repeated the learner's utterance highlighting the error by means of emphatic stress, underlined bolded uppercase words, to which reformulation by the participants was required as modified output. It is worth mentioning that the role of the emphatic stress was thoroughly explained to the participants because it required the participants to grammatically correct the underlined bolded uppercase words' usage by adding, deleting, changing, and modifying surrounding or within words. It was also emphasized that the underlined bolded uppercase words had nothing to do with spelling mistakes.

### **Example (2), asynchronous corrective feedback–repetition implicit**

**Amir Hossein:** ... When I have a problem in my lessons, the teacher can help me in it....**Instructors' corrective feedback:** ... When I have a **PROBLEM IN MY LESSONS**, the teacher can **HELP ME IN IT**....

**Modified output by Amir Hossein:** ... When I have a problem with my lessons, the teacher can help me with it....

In order to make sure of noticing the teacher-provided corrective feedback, the participants of the experimental groups were obliged to send their modified output as an independent e-mail prior to receiving the next new topic.

The control group received placebo feedback, i.e., "topic relevant response that does not contain the target form in the same context", for example: "student: In Sweden the global warming is a problem. Native speaker: Many people believe it's a problem everywhere" (Sauro, 2009, p. 104) to which no modified output was required.

Teacher-provided corrective feedback for the experimental groups mainly focused on the correct use of prepositions. Other grammatical deviations were corrected without bringing the participants' attention to them. At the end of the treatment, the participants of the three groups were presented with the post-test assessing the extent to which the treatment was successful in enhancing the experimental groups' ability over the control group's to correctly apply prepositions.



This study was conducted within the period of 8 weeks in the summer of 1390 at the ILI, Fadak branch in Tehran. During the experiment, the current researcher held all of the three classes himself, taught the learners, distributed e-mail writing topics every week, provided appropriate corrective feedback to all the groups, and administered the post-test.

## RESULTS AND DISCUSSION

A one-way analysis of variance (ANOVA) was calculated regarding the correct use of prepositions by the three groups. Differences among the experimental and control groups were considered significant at the .05 alpha level.

### Analysis of Results on Prepositions

In order to answer the research questions, descriptive statistics had to be calculated first. The summary of descriptive statistics is shown in Table: 1.

Table: 1  
Descriptive statistics on prepositions

Corrective Feedback	N	Mean	Std. Deviation	Minimum	Maximum
Experimental Group 1 (Explicit)	15	30.20	3.783	23	36
Experimental Group 2 (Implicit)	15	25.87	3.720	19	32
Control Group	15	23.73	4.832	16	37

The minimum and maximum scores were 16 and 37 respectively, and belonged to the control group. As Table: 1 shows, the experimental group 1 who received explicit computer-mediated corrective feedback with the mean score of 30.20 significantly outperformed the experimental group 2 and the control group with the mean scores of 25.87 and 23.73 respectively. The experimental group 2 also performed slightly better than the control group. The differences between the groups' mean scores are presented in the following figure.

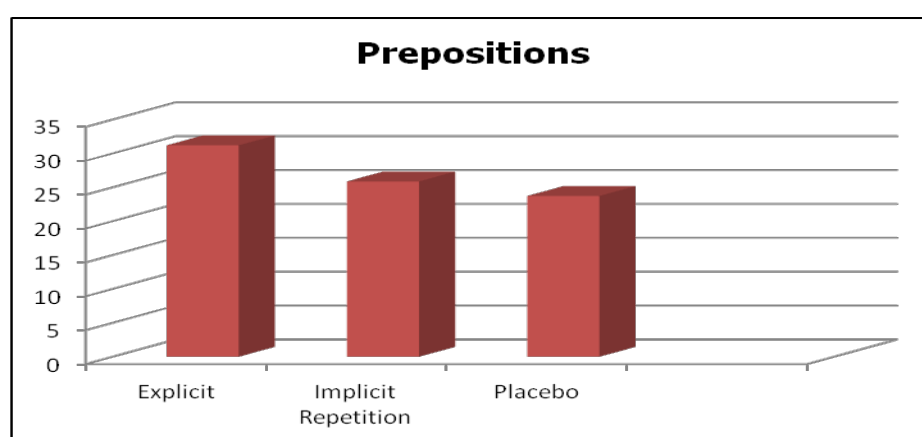


Figure: 1  
Group means on prepositions

In order to investigate the effect of asynchronous computer-mediated corrective feedback on increasing the correct use of prepositions, a one-way ANOVA was calculated. The results of the one-way ANOVA showed statistically significant difference at the  $p=.05$  level of significance for the three groups in this study:  $F(2, 42)=9.487, p=.000$ .

Additionally, to find out where the difference(s) lie regarding the mean scores of the three groups, post-hoc comparisons through the Tukey HSD test were carried out. Following table summarizes the results of post-hoc tests.

**Table: 2**  
**Results of the post-hoc tests on prepositions**

Corrective Feedback	Mean Difference	Std. Error	Sig.
Experimental 1 (Explicit) Experimental 2 (Implicit)	4.333	1.513	.018
Experimental 1 (Explicit) Control Group	6.467	1.513	.000
Experimental 2 (Implicit) Experimental 1 (Explicit)	-4.333	1.513	.018
Experimental 2 (Implicit) Control Group	2.133	1.513	.345
Control Group Experimental 1 (Explicit)	-6.467	1.513	.000
Control Group Experimental 2 (Implicit)	-2.133	1.513	.345

Table: 2 shows that the mean differences between the experimental group 1 ( $M=30.20, SD=3.783$ ) and the experimental group 2 ( $M=25.87, SD=3.720$ ) was statistically significant:  $.018 < .05$ . The mean difference between the experimental group 1 ( $M=30.20, SD=3.783$ ) and the control group ( $M=23.73, SD=4.832$ ) was statistically significant as well:  $.000 < .05$ . There was no significant difference between the experimental group 2 and the control group because the level of significance was found to be  $.345 > .05$ .

One of the main goals of this study was to investigate the probable effectiveness of asynchronous computer-mediated corrective feedback-explicit and implicit, via e-mailing on enhancing the correct use of prepositions. Although previous research mostly supports the efficacy of computer-mediated corrective feedback on improving grammar accuracy (e.g., Lyster & Ranta, 1997; Campillo, 2003), the results of the present study both negate and support this tenet.

Research question 1 dealt with the investigation of whether explicit asynchronous computer-mediated corrective feedback could increase the correct use of prepositions. Results of the one-way ANOVA on the post-test revealed statistically significant improvement for the experimental group 1 who received explicit corrective feedback over the experimental group 2 and the control group.

Research question 2 dealt with the investigation of whether implicit asynchronous computer-mediated corrective feedback could increase the correct use of prepositions. Results of the one-way ANOVA on the post-test revealed that the experimental group 2 who received implicit corrective feedback failed to outperform the experimental group 1 and the control group.

With respect to the first research question and contrary to the findings of Bitchener, Young, and Cameron (2005), explicit corrective feedback proved effective in drawing learners' attention to the differences between their output and target norm. Therefore, findings of the first research question support Schmidt's (1990) Noticing Hypothesis in enabling learners to notice the gap resulting in the improvement of grammar accuracy.

Accordingly, superiority of explicit corrective feedback in increasing the correct use of prepositions by Iranian EFL learners further supports St. John and Cash (1995) findings on the efficacy of corrective feedback via e-mailing on increasing structural accuracy of written output. Similarly, Sheen, Wright, and Moldawa (2009) concluded that explicitly correcting learners' writing resulted in more accurate use of prepositions, articles, etc. This superiority can be due to various factors.

First, Iranian EFL learners generally tend to rely on their teachers to provide them with correct structures when they make a mistake because the main teaching method in this institute is still reminiscent of Audio Lingual Method (ALM). In this sense, they are most responsive when teachers locate the error, correct it, and require them to modify their language. Second, as prepositions are of high frequency regarding Iranian EFL learners' output both orally and in the written form, learners are more willing to integrate explicitly teacher-provided corrective feedback on their erroneous structures.

With respect to the second research question, the findings proved to be controversial compared to the current view on the effectiveness of computer-mediated corrective feedback as no statistically significant results were found regarding increasing the correct use of prepositions for the experimental group 2 who received implicit corrective feedback over the experimental group 1 and the control group. Apparently, the findings are in line with an earlier view held by Truscott (1996) claiming that "grammar correction has no place in writing courses and should be abandoned" (p. 328). To further support the findings of the second research question, some researchers (e.g., Ferris & Roberts, 2001; Bitchener et al., 2005) also found that providing learners with corrective feedback didn't have any significant effect on increasing the correct use of prepositions.

But by looking at recent studies (e.g., Lee, 1997; Sheen, 2007; Sheen et al., 2009; Askland, 2010) and also the findings of the first research question, it would be wrong to generalize these findings to all aspects of language learning and corrective feedback as there is ample evidence confirming the applicability and efficacy of corrective feedback on grammar improvement. Findings of the second research question can be accounted for if we look at Persian and English contrastively. According to Swan (2005), "In some expressions English has no preposition where one may be used in another language; in other expressions the opposite is true" (p. 425) which could be of great difficulty to EFL learners. In this sense, Persian language is replete with expressions in which prepositions are mostly absent in their English translations, for example:

Persian: /man ba shoma movafegh hastam. /  
Transliteration: (I with you agree am.)  
English translation: (I agree with you.)

Persian: /az doostam yek soal porsidam./  
Transliteration: (from friend my a question asked I.)  
English translation: (I asked my friend a question.)

By looking at these examples, it becomes apparent that some prepositions present in Persian are not present in their English translations. Thus, learners might have negatively transferred incorrect structures from their mother tongue into their target language.

Accordingly, following reasons may as well account for the inefficacy of implicit corrective feedback on the correct use of prepositions. First, Iranian EFL learners mostly tend to *think* in their mother tongue thus, inappropriately transferring Persian structures into English resulting in nontarget-like structures.

Second, the treatment that the experimental group 2 received might have been ineffective in enabling them to apply correct prepositions in different testing instruments. Third, the control group might have successfully drawn on their previous knowledge on prepositions to answer testing instruments. Fourth, the participant of this study might have had previous experiences in learning EFL affecting the testing results. Fifth, psychological factors might have affected their performance on the test. It can be claimed that, reminding learners of their mistakes might have acted as psychological barriers to their uptaking of teacher-provided feedback resulting in inefficacy of the treatment. On the other hand, the control group might have interpreted their writings as perfect as they didn't receive any feedback.

Additionally, with respect to the aforementioned reasons, the experimental group 2 simply failed to notice the teacher-provided corrective feedback as the participants didn't receive any information on the formal aspects.

Similarly, the underlined bolded uppercase words might have misled them into wrongly correcting and changing the word itself or adding unnecessary words without realizing incorrect parts. Due to the fact that the participants had low proficiency, implicitly requiring them to correct their errors might have demanded deeper levels of processing than correcting explicitly which they might lack at this stage.

## CONCLUSION

In this study, we assessed the impact of asynchronous computer-mediated corrective feedback on increasing the correct use of prepositions. On the basis of the results, it became evident that the explicit corrective feedback had significant effect on increasing the correct use of prepositions. In the same sense, implicit corrective feedback didn't have any significant effect on increasing the correct use of prepositions over both the experimental group 1 and the control group.

The findings of the present study also provide further implications as to the efficacy of computer-mediated corrective feedback as a pristine searching ground on different aspects of language grammar. However, some limitations are attributed to this study.

First, the level of proficiency was elementary, and it is possible that more proficient learners would have performed differently. Second, the overall teaching method at the ILI, i.e., a modified version of ALM, might have affected the results.

Finally, it should be admitted that most previous research on the corrective feedback and positive contributions to grammar accuracy improvement and in particular prepositions has been in the forms of written, oral, and SCMC chat. Thus, generalizations to asynchronous computer-mediated via e-mail especially in EFL environments should be done with great care.

In conclusion, despite these limitations, it is believed that the findings of this study are encouraging as technology has been finding its way into pedagogical environments. Additionally and with respect to the results of the present study, it stands to reason that there is still plenty of room for further research in this field.

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## APPENDIX

### Characteristics of Lyster & Ranta's (1997) Categories of Corrective Feedback

Corrective Feedback Type	Definition	Example(s)	Nature of Error Indicated	Target like Reformulation Provided	Elicited Output
Explicit Error Correction	Explicit provision of the target like reformulation	You should say visited.	Yes	Provided directly	None or repetition
Metalinguistic Feedback	Comments, information or questions (that may or may not contain meta language but do not include the reformulation) related to the ill-formedness of the utterance	There's a mistake.	No	No	Identification of error and/or reformulation
		It's past tense.	Yes	Provided indirectly through meta linguistic hint at correct reformulation	Reformulation
		Did you use the past tense?	Yes	Provided indirectly through Meta linguistic question concerning rule governing reformulation	Metalinguistic response, yes/no response, or reformulation
Elicitations	A prompt for the learner to reformulate	Try that again.	No	No	Reformulation
		How do we say that in the past tense?	Yes	No	Reformulation
		Yesterday we ...	Sometimes	No	Reformulation
Repetitions	Repetition of all or part of the utterance containing the error, often accompanied by a change in intonation	Yesterday we visit my aunt.	Sometimes	No	None or repetition
Recasts	Implicit reformulation of all or part of the learner's utterance	Yesterday we visited my aunt.	Yes	Reformulation provided	Repetition
		I visited my aunt last week.	Yes	Reformulation provided	Repetition
Translations	Target language translation of unsolicited use of the L1.	***	Yes	Reformulation provided	Repetition
Clarification Requests	An utterance indicating a problem in comprehension, accuracy or both.	Pardon?	No	No	Repetition, reformulation, or meaning elaboration